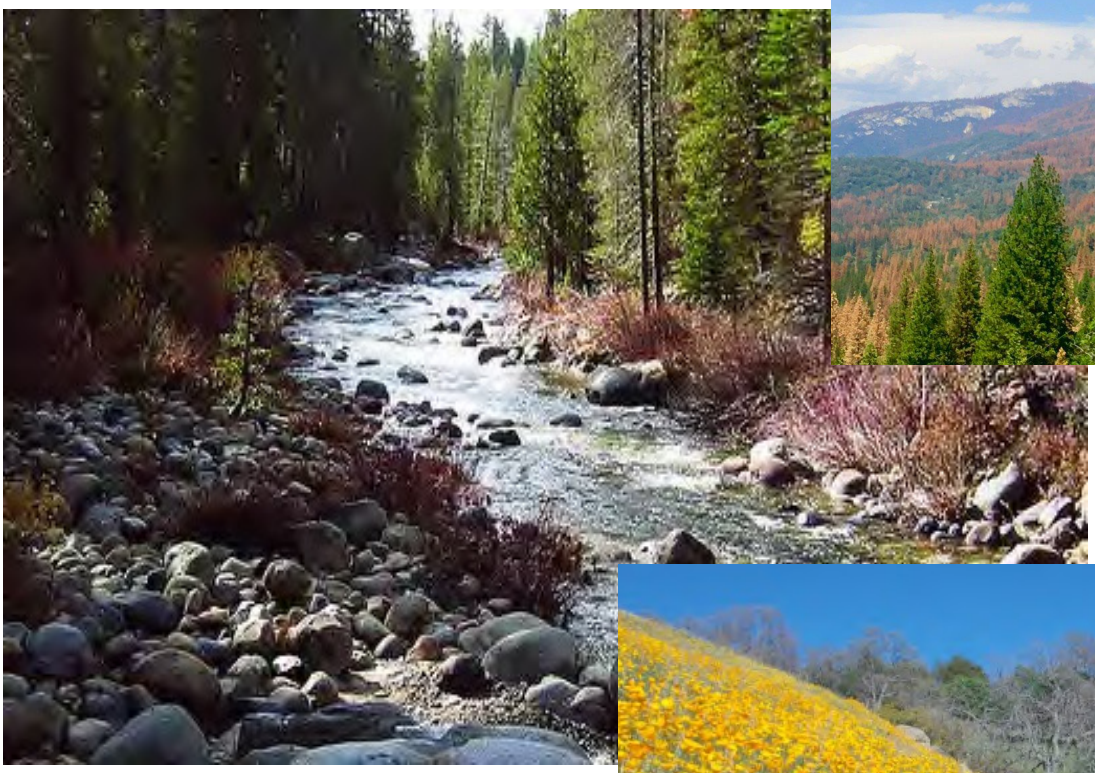
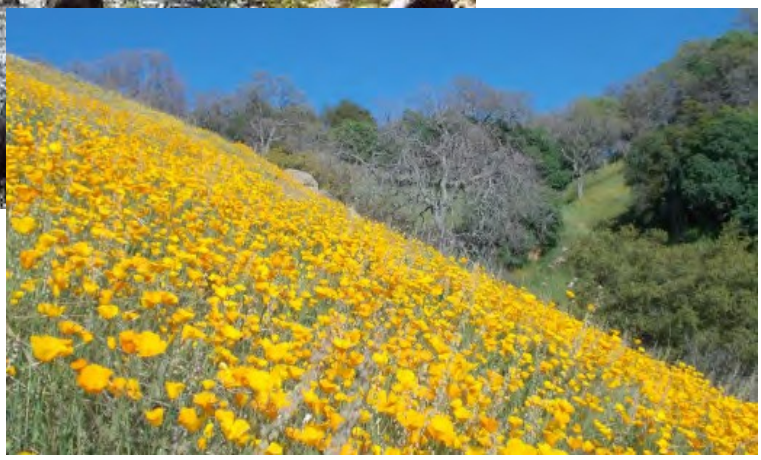
United States Department of Agriculture

Revised Draft Environmental Impact Statement for Revision of the Sequoia and Sierra National Forests Land Management Plans

Summary





Forest Service Pacific Southwest Region R5-MB-321-D June 2019

Photo captions and credits:

Cover Photos (left to right, clockwise): Dinkey Creek on Sierra National Forest; tree mortality across the southern Sierra National Forest; and California Poppies along the Kings Canyon Scenic Byway on the Sequoia National Forest. Photos by: US Forest Service.

Page 1: View of the Sierra Crest. Photo by: Mauro Napoletano, Patrol 42

Page 2 (left to right): Photo of southern Fresno county on the Sierra National Forest in May 2015 with minimal brown (dead or dying) trees across the landscape & Photo of the same area less than a year later in February 2016 with extensive tree mortality across the landscape. Photo by: Cal Fire Tree Mortality Task Force.

Page 4: A fire burns at night on a National Forest. Photo by: Kari Greer, 2017

Page 5: Tribal members and US Forest Service employees meeting during the plan revision process to discuss the Inyo, Sequoia, and Sierra plan revision effort. Photo by: US Forest Service

Sequoia & Sierra National Forests

Forest Plan Revision

Revised Draft Environmental Impact Statement

Executive Summary

THE SIERRA NEVADA region attracts visitors from around the globe. The Sequoia National Forest landscapes are as spectacular as the ancient, majestic sequoia groves found within its boundaries. Soaring granite monoliths, glacier-torn canyons, and roaring whitewater rapids are beloved gems of the Sierra Nevada's southern end. The Sierra National Forest is known for its stunning mountain scenery and abundant natural resources. Elevations in the forest range from 900 to almost 14,000 feet in the rugged high country, providing visitors with arguably some of the most breathtaking views in the entire west.

The forests provide a rich array of ecosystems and habitat types that support thousands of wildlife, fish, and plant species. Along with a variety of topography, geology and soils, the region is influenced by a range of precipitation and temperature regimes. Three distinct biological provinces—the Sierra Nevada, San Joaquin Valley, and Tehachapi Mountains—give a sense of unique ecological diversity to the region.

Each forest boasts over 300 species of wildlife (birds, reptiles, amphibians, and fish) and over 2,000 native plant species. The Forest Service manages habitat for species proposed or candidates for listing under the Endangered Species Act. The forests play a role in developing habitat management strategies to ensure the persistence of at-risk species and recovery of a little over a dozen threatened, endangered, proposed, or candidate Federally-listed species in the management area, including the California condor, southern willow flycatcher, Sierra Nevada bighorn sheep, Yosemite toad, California spotted owl, fisher, and whitebark pine.

Together, the Sequoia and Sierra National Forests encompass about 2.4 million acres in the southern Sierra Nevada. The Sequoia National Forest manages the 328,000-acre Giant Sequoia National Monument, established to protect the largest living trees on earth and watersheds that provide clean water to many communities. The Monument Management Plan has existing direction for managing the long-term ecological resiliency and diverse human uses in the monument. There is no additional planning direction for the monument under this planning effort, except related to wild and scenic river eligibility and recommended wilderness.

The Sequoia and Sierra National Forests are social and economic gateways into adjacent Yosemite National Park and Sequoia and Kings Canyon National Parks, contributing a combined $15.4 million dollars each year in income and wages to local counties, from visitor spending alone. The forests are within a 4-hour drive of nearly half of California's population, including residents of the San Joaquin Valley and San Francisco and Los Angeles metropolises. Almost a dozen major reservoirs in the Sierra National Forest and several reservoirs just outside the Sequoia National Forest boundary, such as Pine Flat Reservoir and Lake Isabella, provide water for consumption, generate hydroelectric power, and irrigate rich farmlands in the San Joaquin Valley.

Mountain communities in the region are surrounded wholly or in part by Sequoia and Sierra National Forest lands. The forests support families with direct jobs from logging, grazing, and other operations, forest timber and non-timber products, and other benefits such as clean air and water, recreation opportunities, species habitat, and energy development.

Timber harvested from the Sierra National Forest is an economic driver to the local economy. The last remaining sawmills in the area depends on forest management to sustain their business and forest management depends on those mills to help tackle the complex and rapidly changing ecological problems these forests are encountering.

CHALLENGES WE FACE

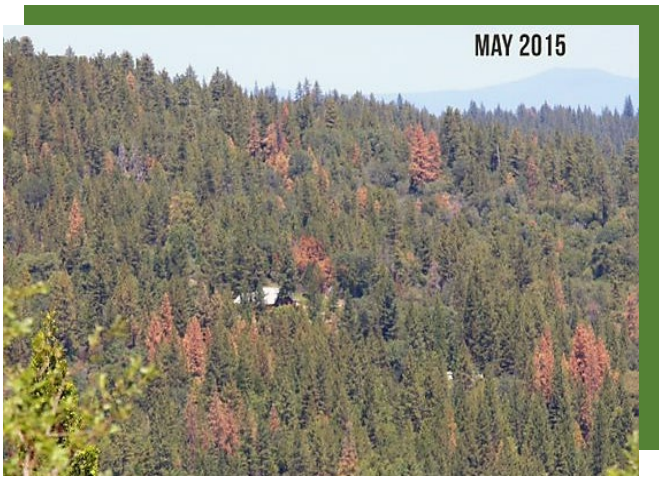
The Sequoia and Sierra National Forests face new challenges in managing for the future. Over the past century, temperatures and prolonged drought in California have increased. In the past 30 years, droughts have worsened, causing a number of environmental consequences, such as reduced water in the ecosystem, which leaves forests vulnerable to other stressors.

The Sequoia and Sierra National Forests are at the epicenter of this issue, as most of California's tree mortality is concentrated in the Sierra Nevada region, with substantial portions in the two forests. Severe drought starting in 2011 severely weakened trees across the two forests, leaving them vulnerable to ongoing bark beetle infestations. Around 2015, amidst plan revision, the Sequoia and Sierra National forests began seeing die-offs at an alarming rate (see photos below).

To date, over 147 million trees lie standing dead across the state, with about 1.4 million acres concentrated on the Sequoia and Sierra forests. Scientists are monitoring the massive tree die-off in the Sierra Nevada and warn that climate change impacts over the next decade will increase the threat of ongoing mortality in the region. Changing climate is a driver for reconsidering approaches to forest management on these lands, and forecasts an unsettling future of further disturbance.

Fire trends have been increasingly high and severe over the past several decades. The effects of these fires are often seen as destructive, in particular when large, high-intensity fires pass through communities and devastate homes and infrastructure.

Yet fire plays a critical role in shaping the ecology of the Sierra Nevada, and prior to European settlement, had been doing so for millennia.



For thousands of years and continuing still, Native Americans have used fire to manage the landscape for beneficial uses. Fire was more widespread and less intense pre-European settlement for these reasons. The complexities the two forests currently face are the result of suppressing natural processes and in turn, changing the way fire behaves on these landscapes. Evolving science has shaped our modern view of how we manage fire, but the consequences of past suppression are not easily repaired.

Past management actions, such as fire suppression, have contributed to our current state of substantially denser forest stands than were present historically. Starting in the early 1900s, forest management in the United States shifted to suppressing fires. Foresters weren't fully aware of the ecological benefits fire provided to forested landscapes and were primarily concerned with avoiding the impacts fire had on merchantable timber. Species that would have been periodically thinned by fires were instead provided the conditions to survive and grow. During the 1990s, the Forest Service shifted from even-aged timber management to more stand-maintenance-thinning of trees that historically would have been periodically thinned by fires. This shift from clear cutting and regeneration through tree planting to cutting select trees from a stand, like pine and mixed conifers in the southern Sierras, represented changing management objectives geared towards reducing impacts to species habitat and reducing the threat of fire in areas close to communities. Forest management activities now aim to reestablish fire on the landscape in the aims of reducing the risk of high-intensity fires and returning the mix of species in a given forest stand to its natural range of variation, which in turn increases the heterogeneity and resilience of these stands.

Tightly stocked forests compete for resources and are more vulnerable to bark beetle infestation. The rapid loss of trees affects the integrity of the entire ecosystem. Loss of essential tree species affect associated wildlife and plants, and dead trees can increase uncharacteristic wildfire potential and severity.

Ecological concerns inevitably impact society. More and more people are building their homes in rural forested lands most susceptible to wildfires. As more people move into areas adjacent to national forests, referred to as the wildland-urban intermix, lives, property, and communities are threatened by uncharacteristic, high-intensity wildfires. It has become more dangerous, difficult and costly to keep these areas properly maintained and safeguarded against future disturbances while protecting the safety of firefighters. California has just emerged from two back-to-back years of record-setting wildfires. Many have seen first-hand how catastrophic wildfires have the potential to devastate ecosystems and communities.

Uncharacteristic, high-intensity wildfires leave wildlife, plants, fish, and watersheds vulnerable while communities are ecologically, economically, and socially damaged. To sustain these lands and surrounding communities for the future, the Sequoia and Sierra National Forests need to develop a plan that emphasizes the use of periodic fire and thinning to bring these densely stocked stands closer to their natural, fire-adapted conditions while balancing other human uses of the forests.

Restoration activities need to occur at a faster pace and scale than the Sequoia and Sierra National Forests are currently achieving with funding, capacity, and policy constraints. These activities include thinning densely stocked stands ("mechanical treatments" in the analysis), re-introducing fire onto the landscape through planned fires used to meet management objectives ("prescribed fire" in the analysis) or allowing unplanned, natural wildfires to benefit resources ("managed fire" in the analysis). In addition to budget and policy constraints, the forests are also limited by reduced opportunity to conduct restoration activities due to loss of forest from impacts of fires, droughts, insects, disease, and other drivers.

Now more than ever, the two forests look to partnerships, collaboration and coordination with counties and states, and shared stewardship as a means for accomplishing restoration goals on the Sequoia and Sierra National Forests.

The Forest Service relies on the value of timber harvested during forest restoration activities to help offset some of the cost of the work ahead of us. There are three remaining sawmills in the southern Sierra Nevada: Sierra Forest Products in Terra Bella, Tulare County; and Sierra Pacific Industries in Chinese Camp and Standard (Tuolumne County). Only the mill in Terra Bella has the economic feasibility to purchase timber off these forests. Absent a consistent flow of timber products at levels that can sustain the mill, the Sierra Forest Products mill in Terra Bella would need to find other as yet unidentified sources of timber to sustain their operations. The absence of the mill at Terra Bella, or similar capacity wood infrastructure that could service the Sequoia and Sierra National Forests, would inhibit the ability of the forests to accomplish restoration activities at the scale that is needed given the ecological challenges this region faces. Loss of the mill would mean that rather than having a consistent forest products market to help defray some of the costs of restoration, a greater part of the restoration work would have to be accomplished with already limited appropriated budgets and at a much smaller scale across the landscape.

As managers responsible for these lands, the Sequoia and Sierra National Forests play an important role in maintaining and restoring healthy, resilient ecosystems. This means taking on the challenges that face us and recognizing these challenges present the two forests with an opportunity to better understand and apply the evolving science regarding the interdependent relationship between ecological processes, forest restoration needs and the local sawmill infrastructure that can help the Forest Service accomplish its goal to better protect communities and ecosystems.

FOREST PLAN REVISION is a land use planning process that helps a forest revise their forest plan. Forest plans are strategic documents that set the overall management direction and guidance for each national forest. Forest Plans do not provide site-specific direction, such as where to put a recreation trail or what timber will be harvested, but instead guide management activities at a forest-wide scale, providing direction of uses within each national forest.

A forest plan identifies areas intended for certain uses, such as timber harvest, primitive recreation, or rare plant protection. It describes specific social, economic, and ecological characteristics that management actions should be working towards (referred to as desired conditions) and constraints on management activities that act as sideboards for land managers when developing site-specific projects to implement the forest plan (referred to as standards and guidelines). Carefully balancing multiple uses is an important part of forest planning to support sustainable uses and maintain healthy ecosystems. Planning in national forests and grasslands presents a vision for a balanced and thoughtful use and protection of the many resources on public lands.

The National Forest Management Act is a law that requires the Forest Service to develop forest plans, and in 2012, the U.S. Department of Agriculture issued a new rule to guide the forest planning process. The 2012 Planning Rule emphasizes that forest plans are to guide management of the national forests so they are ecologically sustainable and contribute to social and economic sustainability. National forests are managed to provide ecosystems and watersheds with ecological integrity and diverse plant and animal communities. They are also managed to have the capacity to provide people and communities with ecosystem services and multiple uses that provide a range of social, economic, and ecological benefits for present and future generations. The Planning Rule intends for each forest to update its plan through the planning process about every 15 years. The current Sequoia and Sierra forest plans were developed almost 30 years ago and lack guidance informed by new expertise, technology, public values, and science.

The National Environmental Policy Act requires the Forest Service to disclose the potential effects of revising our forest plans. The recently released revised draft environmental impact statement summarized by this document discloses the potential effects from five alternatives to revising the existing Sequoia and Sierra forest plans and includes a draft forest plan based on the Forest Service's preferred alternative.

The Sequoia and Sierra National Forests have been on a collective journey with interested and affected community members, interest groups, industry representatives, neighboring land managers, Tribes, and local and state government representatives to develop draft plans that incorporate the feedback the Forest Service has received throughout the planning effort.

The forests have been very involved in external engagement. They understand that engagement throughout the planning process creates a better, more supported forest plan that addresses the emerging ecological, economic, and social challenges the forests and surrounding communities face today and into the future.

The Sequoia and Sierra forests first began revising their plans in early 2014 with the assessment phase and were joined by neighboring Inyo National Forest. Together, they were referred to as the "Early Adopters" of the newly published 2012 Planning Rule regulations.

Sharing similar biogeography, species, economic drivers, and stakeholders, the Pacific Southwest

Regional Office sought efficiencies in combining the three forests into one plan revision effort. The draft plans and environmental impact statement were released in May 2016. The Regional Office intended for all three forests to move forward to the next stages of the planning process. Ultimately, only the Inyo National Forest was able to make that leap and released a final environmental impact statement, revised plan and draft record of decision in August 2018, and is preparing to sign a record of decision for a final plan later this year.

The Sequoia and Sierra National Forests weren't able to move forward in the planning process. Tree mortality substantially changed and continues to change ecological conditions on the Sequoia and Sierra National Forests, whereas the Inyo National Forest remained relatively unaffected by extensive tree mortality. When reflecting on the ecological changes this caused, and in particular comments received by interested stakeholders about the lack of analysis on this topic in the original draft environmental impact statement, the Sequoia and Sierra forests decided it was best to revise the analysis for the draft plans.

This revised draft environmental impact statement, where only the Sequoia and Sierra forests are included, better addresses the growing ecological, economic, and social concerns related to tree mortality across the southern Sierra Nevada region and includes a discussion of the potential effects of each alternative in addressing tree mortality and other land management challenges.

WHAT WE HEARD

The planning team responsible for developing the revised environmental impact statement for the Sequoia and Sierra National Forests considered feedback from interested and affected community members, interest groups, industry representatives, neighboring land managers, Tribes, and local and state government representatives throughout the entire planning process and incorporated changes based on feedback received.

The team listened to concerns expressed at public, county, and state meetings and Tribal forums as well as comments provided through the assessment wiki website during the early stages of plan revision. The team considered formal comments provided during the scoping period when the forests first announced their intent to start plan revision and shared the initial proposed action. Based on feedback received throughout the entire planning effort, the team has refined the needs for change of current plans and taken a fresh look at the issues raised around plan revision.

After considering information gathered from the assessment process and monitoring data on the existing plan, the Sequoia and Sierra forests identified an initial "need for change" list. The need for change is a concept from planning regulations that acts as a tool for focusing plan revision on issues and resources that may need updated direction compared to current plan direction. Many need for change statements were grouped into emphasis areas which were later refined into revision topics to help organize features of the alternatives that address the underlying needs for change. Our revision topics are:

Ecological Integrity. We need to build capacity in our ecosystems to adapt as conditions change and to restore the resiliency of our ecosystems to disturbances. We need to restore wildlife and plant habitat health and diversity to reduce the stressors which are driving impacts to at-risk species and wildlife habitat.

Fire Management. We need to establish more strategic fire management zones that help reduce the risk of uncharacteristic, catastrophic wildfires. We need to address the need for firefighters to safely manage wildfires for ecological benefits while at the same time reducing fire risk, maintaining resilient wildlife habitat, and reducing smoke and air quality impacts to communities.

Sustainable Recreation. We need to better leverage volunteerism and partnership opportunities to achieve a balance between increasing visitation at popular sites and reducing impacts from overcrowding and conflicts in use to cultural resources, natural resources, settings and scenery.

THE ISSUES

Ongoing Tribal forums, public workshops, local meetings, and formal and informal comment periods served as venues for the public and interested stakeholders to provide feedback on the revision process. This feedback helped the Sequoia and Sierra National Forests understand what might be missing from the plan revision process and develop better, more informed plans for the future.

The planning team used feedback to help frame issues and their relationships to resources and forest planning. Significant issues are those used to develop alternatives and modify the proposed action. The team sorted significant issues into two groups: 1) ecosystem and wildlife issues; and 2) management or use issues.

Ecosystem and wildlife issues include:

1. Ecological Resilience, Wildlife Habitats, and Wildfire. The amount, type, and location of thinning to improve ecosystem resilience to disturbances, such as large, high-intensity wildfires and insect and disease, and reduce the threat of wildfires to communities over the long-term, may not provide adequate habitat in the short-term for wildlife species that use forests with large trees and dense canopy cover.

2. Forest Resilience and Forest Density. The limitations on effectively treating enough areas to reduce the density of trees and the level of fuels because of concerns for wildlife habitats may leave too much of the forest at risk of loss or unacceptable damage from wildfires or insect attacks during droughts exacerbated by climate change.

3. Fuels Treatments and Fire Management. The amount of prescribed fire and managed wildfire to benefit resources may not be sufficient to restore fire in frequent fire ecosystems. The amount of fire restored to the landscape may not be achievable without reducing existing fuels before treatment.

4. Watershed Restoration. The proposed amount of watershed restoration may not keep pace with the increased stresses to aquatic and riparian systems from drought and climate change, which could result in species endangerment and possible extinction.

5. Protecting Aquatic Diversity. The proposed direction may not adequately protect areas of high aquatic species diversity.

Management and use issues include:

6. Recommended Wilderness. The proposed management direction offers an opportunity to manage more areas as recommended wilderness to protect them from development for future generations. However, recommending additional wilderness areas in the proposed revised plans might unnecessarily prohibit and further geographically constrain management activities and uses, including restoration activities and tribal uses that would otherwise be allowed.

7. Smoke. Increasing the amount of prescribed burning, and allowing the management of wildfires to meet resource objectives would produce more smoke that might impact human health and affect the tourism-based and resource-based economies of counties and rural communities.

8. Forest Products. The proposed pace and scale of forest management activities and forest product outputs may not adequately contribute to sustaining local and regional industry infrastructure needed to accomplish restoration objectives.

THE ALTERNATIVES

Each alternative represents a different approach for managing the Sequoia and Sierra forests into the future. The Forest Service developed the alternatives after considering feedback from Tribes, state and local governments, community members, organizations, and other federal agencies. Each alternative, except Alternative A, addresses the needs for change underlying this plan revision effort, reflected in the Revision Topics. A comparison chart included at the end of this summary reflects the main components of each alternative, organized by revision topic. Issues were used to develop key differences between the alternatives to better respond to your concerns. Revision Topics and Issues are captured above.

Alternative A: The No-Action

Alternative A is the "no action alternative." If chosen, the forests would keep their current plans in place and all existing management direction would remain the same. This alternative may not meet future resource needs, utilize the best available science to address forest resiliency, or address issues raised by the public.

Alternative B: The Active Restoration Alternative

Alternative B is the "preferred alternative" and is reflected in the draft forest plans. It focuses on active management to restore healthier ecosystems that are fire-adapted, clear direction for managing fisher and California spotted-owl habitat, the development of recreation management areas, and an aquatic and riparian habitat management strategy. Alternative B was designed to be responsive to issues on the proposed action raised during scoping.

Alternative C: The Passive Restoration Alternative

Alternative C approaches forest restoration more passively than alternative B. It focuses on improving fisher, California spotted owl and seral habitat. Restoration is focused on mostly non-mechanical vegetation treatments to avoid immediate impacts to at-risk animal habitat, with mechanical treatment focused mostly in areas within a one-quarter-mile buffer from structures (referred to as the defense zone). This alternative provides the most recommended wilderness acres of all the alternatives analyzed. Alternative C was designed to address issues 1, 5, and 6.

Alternative D: The Maximum Active Restoration Alternative

Alternative D is the most aggressive approach to forest restoration. It focuses on achieving long-term goals for creating resilient forests to maintain future species habitat, with the recognition that there would be short-term impacts to at-risk species. Restoration would happen at a rapid rate across large portions of the forest by relaxing some wildlife constraints in various fire zones to allow treatments that help protect communities. There are no recommended wilderness areas under this alternative. Alternative D was designed to address issues 2, 3, and 8.

Alternative E: The Passive Restoration & Backcountry Management Alternative

Alternative E shares a similar overall framework of passive restoration to Alternative C. Alternative E proposes different locations and overall less recommended wilderness areas than Alternative C, and the inclusion of a backcountry management area, which allows mechanized and limited motorized use. Alternative E was designed to address issue 6.

WE'RE IN THIS TOGETHER

NEXT STEPS

The release of the revised draft environmental impact statement introduces another opportunity in the plan revision process to hear from the public and interested stakeholders on the future of the Sequoia and Sierra forest plans. Publication of the Environmental Protection Agency's Notice of Availability in the Federal Register officially initiates a public comment period on the draft forest plans and revised draft environmental impact statement. The comment period will end 90 days from the publication date of the notice in the Federal Register.

The comment period is an opportunity for any interested parties to be involved in the planning process, to offer thoughts on alternative ways for the forests to accomplish what is proposed, to comment on the proposed alternatives, and to work with the Sequoia and Sierra National Forests in doing what is right for the land, while also enhancing social and economic vitality.

TIPS ON COMMENTING

The Forest Service reads and considers all comments received throughout the planning process to help shape the final analysis and inform decision-making. Comments that provide relevant and new information with sufficient detail and rationale are the most useful. Comments should be within the scope of the revision, have a direct relationship to resources or forest planning issues, and must include supporting reasons for the responsible official to consider. Your feedback will be most helpful if it provides:

1. Modifications or corrections to the information in the revised draft environmental impact statement or draft forest plans,
2. Missing environmental or socioeconomic information not already listed in the revised draft environmental impact statement or draft forest plans,
3. New information about laws, regulations, or guidance that apply to land management, or
4. Missing scientific research or errors in our analysis.

Following the 90-day public comment period, the planning team will consider all comments received and use them to address any changes needed in the analysis and draft plans. The forests will then release the final environmental impact statement, revised plan, and draft record of decision. Publication of final documents will then initiate a pre-decisional administrative review, also called the objection process, which represents a final opportunity for the public to provide input prior to a final approved decision. The public will have 60 days to submit objections during this objection process. More information about the objection process is available at 36 CFR 219 Subpart B.

In order to have standing in the objection process, members of the public must have previously submitted relevant substantive formal comments during a designated opportunity to comment, such as this 90-day public comment period. Comments must be specific and include the names and addresses of commenters. Anonymous comments will be accepted and will always be considered; however will not provide standing for objection.

WHERE TO COMMENT

You may submit your comments using the following options:

By project web-comment form: https://tinyurl.com/USFS-r5planrevision
By email: Send your written comments to r5planrevision@fs.fed.us
By mail: Send your written comments to Planning Team Leader, Forest Plan Revision, 1323 Club Drive, Vallejo, CA 94592.

TRIBAL FORUMS & PUBLIC MEETINGS

The Sequoia and Sierra National Forests are hosting upcoming Tribal forums and public meetings to give interested parties an opportunity to learn and ask questions about the revised draft environmental impact statement and draft plans. Please visit the project website (below) for the most up to date information regarding meetings and comment period timeframes.

FIND US ONLINE

For more information about the Sequoia and Sierra National Forests revision effort and to download project documents, please visit us online: https://tinyurl.com/USFS-r5planrevision

SUMMARY OF ALTERNATIVES

Revision Topics	Alternative A The No-Action	Alternative B Active Restoration	Alternative C Passive Restoration	Alternative D Maximum Active Restoration	Alternative E Passive Restoration and Backcountry Management
Ecological Integrity					
Vegetation management	Forest management direction focuses on short-term retention of mature forests for old forest-associated wildlife species. **Passive Restoration** Vegetation and fuels management treatments are prioritized in areas closest to communities and structures called the wildland-urban intermix. Outside these areas, vegetation and fuels treatments are prioritized in strategically placed treatment areas in roughly geometric patterns across the forest. **Wildland Urban Intermix Threat Zone** Inside the wildland-urban intermix zone, there are fewer restrictions on the intensity of mechanical thinning. Some restrictions are also relaxed in the wildland-urban intermix threat zone. **Tree Removal Limits** A forest-wide standard and guideline limits the removal of conifer trees greater than 30 inches in diameter.	Forest management direction focuses on restoring vegetation to desired conditions, based on the "natural range of variation" (NRV), structural heterogeneity, and habitat features that support at-risk species. **Active Restoration** Treatments continue to focus on reducing risk of fire near communities. Mechanical thinning and prescribed burning activities are strategically located along roads and ridgetops for greater opportunity to manage wildfires to meet resource objectives and safely reintroduce fire on a landscape-scale. **Wildlife Habitat Management Areas (WHMA)** Vegetation treatments focused in WHMAs, strategically mapped areas across the forest, provide mature forest habitats for species, while reducing threats of wildfire and increasing resilience of old forests. **Tree Removal Limits** Forest-wide direction limits the removal of conifer trees greater than 30 inches in diameter with exceptions for ecological restoration, safety, and equipment operability.	Forest management direction focuses on short-term retention of mature forests for old forest-associated wildlife species. **Passive Restoration** Restoration treatments focus on the use of prescribed fire and managing wildfires to meet resource objectives where feasible. **Wildland Urban Interface Defense Zone** Mechanical thinning is focused within the wildland urban interface defense zone, areas closest to communities and structures, with limited mechanical thinning allowed elsewhere. **Tree Removal Limits** Forest-wise direction limits the removal of conifer trees greater than 24 inches, with exceptions for safety and equipment operability.	Forest management direction shares a similar overall framework to Alternative B, with more focus on increasing areas treated with mechanical thinning and prescribed fire to improve the long-term sustainability and resiliency of terrestrial ecosystems. **Active Restoration** A more aggressive approach to forest restoration. Projects double the restored acres compared to Alternative B. **Focus Landscapes** Treatments emphasized in focus landscapes, areas where a system of fuelbreaks and concentrated, strategically-placed treatments are designed to increase forest landscape resilience and opportunities to restore fire on the landscape. **Tree Removal Limits** Like Alternative B, forest-wide direction limits the removal of conifer trees greater than 30 inches in diameter with exceptions for ecological restoration, safety, and equipment operability.	Forest management direction shares the same framework as Alternative C, including a focus on passive restoration and the same tree removal limits.

Revision Topics	Alternative A The No-Action	Alternative B Active Restoration	Alternative C Passive Restoration	Alternative D Maximum Active Restoration	Alternative E Passive Restoration and Backcountry Management
Aquatic and riparian ecosystems	Prescriptive standards and guidelines avoid, minimize or mitigate activities and actions that could adversely affect riparian vegetation or aquatic conditions. **Riparian Conservation Areas & Priority Watersheds** Identifies riparian conservation areas and a buffer area around streams, rivers, lakes, meadows, bogs, and other wetland types. The riparian conservation area is wider for perennial streams than for intermittent and ephemeral streams and can be adjusted smaller or larger based upon local site conditions. Maintains Riparian Conservation Areas and focuses watershed restoration in Priority Watersheds under the national Watershed Condition Framework program. **Critical Aquatic Refuges** Maintains 13 Critical Aquatic Refuges (6 on the Sequoia NF and 7 on the Sierra NF).	Direction is functionally similar to that contained in Alternative A, except for streamlining and consolidating direction for consistency with 2012 Planning Rule requirements and modifying direction to allow prescribed burn ignitions and mechanical and hand treatments to restore ecological integrity of riparian areas. Clarifies and strengthens direction for some wetland types like fens. **Riparian Conservation Areas & Priority Watersheds** Maintains Riparian Conservation Areas and focuses watershed restoration in Priority Watersheds under the Watershed Condition Framework. Some direction for riparian conservation areas is more restrictive, such as adopting equipment exclusion zones. Riparian conservation areas are determined to not be suitable for timber production. **Critical Aquatic Refuges & Conservation Watersheds** Eliminates all Critical Aquatic Refuges and establishes larger Conservation Watersheds (2 on the Sierra NF and 3 on the Sequoia NF). Conservation Watersheds are landscape-level areas where reduction in stream sedimentation would improve aquatic habitat. Watershed restoration in Conservation Watersheds would focus on priority watersheds under the Watershed Condition Framework.	**Riparian Conservation Areas & Priority Watersheds** Direction for riparian conservation areas would be similar to Alternative B, except some direction is more restrictive to further minimize the risk of effects to riparian vegetation and aquatic resources. Maintains Riparian Conservation Areas and focuses watershed restoration in Priority Watersheds under the Watershed Condition Framework. **Critical Aquatic Refuges & Conservation Watersheds** Direction for Critical Aquatic Refuges is functionally similar to Alternative A. Establishes Conservation Watersheds (2 on the Sierra NF and 3 on the Sequoia NF). Retains the critical aquatic refuges identified in existing plan direction under alternative A. Adds 27 Critical Aquatic Refuges on the Sierra NF, 15 of which are outside of Conservation Watersheds for a total of 34 Critical Aquatic Refuges. Adds 2 Critical Aquatic Refuges on the Sequoia NF, all of which are located within Conservation Watersheds for a total of 8 Critical Aquatic Refuges.	**Riparian Conservation Areas & Priority Watersheds** Includes the same riparian conservation areas as Alternative B. Direction is similar to Alternative B; however, riparian conservation areas for ephemeral streams are determined suitable for timber production and some restrictions have been reduced to facilitate the increased pace and scale of restoration treatments. Maintains Riparian Conservation Areas and focuses watershed restoration in Priority Watersheds under the Watershed Condition Framework. **Critical Aquatic Refuges & Conservation Watersheds** Does not include Critical Aquatic Refuges and does not establish Conservation Watersheds, instead relying upon forest-wide direction for watersheds and at-risk species.	Direction is the same as that under Alternative C. **Riparian Conservation Areas & Priority Watersheds** Maintains riparian conservation areas and focuses watershed restoration in Priority Watersheds under the Watershed Condition Framework. **Critical Aquatic Refuges & Conservation Watersheds** Establishes Conservation Watersheds (2 on the Sierra NF and 3 on the Sequoia NF). Adds 28 Critical Aquatic Refuges on the Sierra NF, 15 of which are outside of Conservation Watersheds for a total of 34 Critical Aquatic Refuges. Adds 2 new Critical Aquatic Refuges on the Sequoia NF for a total of 8 Critical Aquatic Refuges, all of which are located within Conservation Watersheds.

Revision Topics	Alternative A The No-Action	Alternative B Active Restoration	Alternative C Passive Restoration	Alternative D Maximum Active Restoration	Alternative E Passive Restoration and Backcountry Management
Wildlife, fish and plants	Plan direction manages for federally listed species and Regional Forester designated sensitive species. **Forest Management & Wildlife Habitat Direction** Direction for forest management primarily focuses on short-term retention of dense canopy cover and restricts removal of large trees to provide mature forest habitat for species like the California spotted owl and Sierra marten.	2012 Planning Rule direction manages for at-risk species, which are federally listed species and species of conservation concern. Species of conservation concern are designated by the Regional Forester and replace Regional Forester sensitive species. **Forest Management & Wildlife Habitat Direction** Identifies a wildlife habitat management area (WHMA) containing areas where large trees remain following widespread tree mortality and areas important to landscape level conservation of fisher and California spotted owls. Emphasizes treatments in the wildlife habitat management area to sustain and increase the resilience of mature forests by reducing the risks from wildfires and further tree mortality while limiting short-term effects on habitat change and limiting disturbance during the breeding season for mature forest wildlife species. **Special Habitats** Provides direction to manage special habitats for at-risk species that occupy unique habitats that only occur in limited areas.	Direction for management of at-risk species is the same as under Alternative B. **Forest Management & Wildlife Habitat Direction** Retains emphasis on short-term habitat protection for California spotted owl and fisher in forested habitats by applying plan direction consistent with the Southern Sierra Fisher Conservation Strategy and the Draft Conservation Strategy for the California Spotted Owl. **Special Habitats** Manages special habitats the same as under Alternative B.	Direction for management of at-risk species is the same as under Alternative B. **Forest Management & Wildlife Habitat Direction** Identifies focus landscape areas containing areas where large trees remain following the widespread tree mortality where there is a moderate to high risk of adverse effects from wildfires. Focus landscape treatments emphasize using fuelbreaks along major ridges and strategic roads and other locations to compartmentalize future fires and limit the risk of habitat loss from high severity fire. Treatments within focus landscapes support resilience of mature forests make some tradeoffs by accepting short-term risks to wildlife like California spotted owl and fisher by varying habitat retention and disturbance avoidance direction from the conservation strategies of those two species. **Special Habitats** Manages special habitats the same as Alternative B.	All direction related to wildlife, fish, and plants is the same as under Alternative C.

Revision Topics	Alternative A The No-Action	Alternative B Active Restoration	Alternative C Passive Restoration	Alternative D Maximum Active Restoration	Alternative E Passive Restoration and Backcountry Management
Fire Management					
	Management focuses half of the hazardous fuel reduction treatments in two distance-based areas surrounding the wildland-urban intermix defense zone and wildland-urban intermix threat zone. **Managed Fire** Naturally ignited wildfires are evaluated on a case-by-case basis to determine if they can be managed to meet resource objectives.	Replaces Alternative A zones with four management areas based on a fire risk assessment consistent with the National Cohesive Fire Strategy: community wildfire protection zone, general wildfire protection zone, wildfire restoration zone, and wildfire maintenance zone. **Managed Fire** Strong emphasis on managing naturally ignited wildfires in the wildfire maintenance zone and strongly encouraged in wildfire restoration zone where some mechanical and burning treatments may be needed first.	Fire management zones consist of a combination of Alternative A distance-based wildland-urban intermix defense zone and Alternative B risk-based wildfire maintenance zone. The remainder of the forest would be classified as general fire zone. **Managed Fire** Emphasis on managing naturally ignited wildfires in the wildfire maintenance zones same as Alternative B. In the general wildfire zone, naturally ignited wildfires strongly encouraged but prescribed burning may be needed first.	Fire management zones and approach to managing naturally ignited wildfires are the same as under Alternative B. Emphasizes constructing a strategic and effective system of fuelbreaks within focus landscape areas to help limit the spread of uncharacteristic wildfire and to support larger landscape scale prescribed burning.	All direction related to fire management is the same as under Alternative C.
Sustainable Recreation					
Recommended wilderness	One existing recommended wilderness area entirely within the Giant Sequoia National Monument (15,110 acres).	One additional recommended wilderness area on the Sequoia National Forest: Monarch Wilderness Addition – South, which comprises of 4,906 acres within the Giant Sequoia National Monument. No additional recommended wilderness areas on the Sierra National Forest.	Thirty-six additional recommended wilderness areas. Sequoia NF: Nineteen areas (234,912 acres); portions of eight areas (82,032 acres) within the Giant Sequoia National Monument. Sierra NF: Seventeen areas (217,715 acres); 13,213 acres of one area within the Giant Sequoia National Monument.	No additional recommended wilderness areas.	Twelve additional recommended wilderness areas. Sequoia NF: Five areas (161,508 acres), portions of 2 areas (24,405 acres) in the Giant Sequoia National Monument. Sierra NF: Six areas (164,111 acres), 22,336 acres of one area in the Giant Sequoia National Monument. One recommended wilderness area across both forests.
Wild and scenic river eligibility	Sequoia NF: Existing inventory of 59.9 miles of eligible wild and scenic river segments (7.9 miles in Giant Sequoia National Monument). Sierra NF: Existing inventory of 11.4 miles of eligible wild and scenic river segments (8.7 miles in Giant Sequoia National Monument).	Sequoia NF: Update inventory to include 329.6 miles of eligible wild and scenic river segments (67.4 miles in Giant Sequoia National Monument). Sierra NF: Update inventory to include 46.9 miles of eligible wild and scenic river segments (8.7 miles in Giant Sequoia National Monument).	All direction related to Wild and Scenic River eligibility is the same as under Alternative B.	All direction related to Wild and Scenic River eligibility is the same as under Alternative B.	All direction related to Wild and Scenic River eligibility is the same as under Alternative B.

Revision Topics	Alternative A The No-Action	Alternative B Active Restoration	Alternative C Passive Restoration	Alternative D Maximum Active Restoration	Alternative E Passive Restoration and Backcountry Management
Pacific Crest National Scenic Trail	Existing direction manages the Pacific Crest Trail according to direction provided by a 1982 Comprehensive Management Plan. Direction focuses on the trail tread and immediate surroundings. **Management Area Width** Width of management area is 6 feet.	PCT Management Area is defined as a corridor of the visual foreground landscape zone as defined by the Scenery Management System, (up to one-half mile from the centerline of the trail where visibility is not obscured by terrain). **Management Area Width** Width of management area is up to one-half mile of each side of centerline. Plan direction assigned to the corridor would protect the nature, purposes, and resource values of the trail from degradation by activities and development. Competitive events may be authorized to cross the 13 miles of the PCT within the Sequoia NF that are outside wilderness, but would not be allowed to occur on the trail. New permanent roads would not be permitted within the PCT Management Area unless required by law to provide access to private lands or documented as the only prudent and feasible alternative. New motorized recreation and mountain biking trails within the PCT Management Area may be authorized in site-specific travel management decisions and would be designed to minimize the visual, sound, and resource impacts to the PCT. Utility rights-of-way would be located where impacts already exist and would be limited to a single crossing of the PCT unless documented as the only prudent and feasible alternative.	PCT Management Area defined as a corridor of the visual foreground landscape zone same as under Alternative B, and also includes lands inventoried as "Scenic Attractiveness A" in the Scenery Management System within the trail's viewshed, up to four miles from centerline. **Management Area Width** Width of management area is up to 4 miles each side of centerline. Plan direction assigned to the corridor would be the same as direction under Alternative B, except new utility rights-of-way across or along the PCT would be prohibited.	PCT Management Area is defined as a corridor one-quarter mile from the centerline of the trail. **Management Area Width** Width of management area is one-quarter mile of each side of centerline. Plan direction assigned to the corridor would be the same as Alternative B.	All direction related to Pacific Crest National Scenic Trail management is the same as under Alternative C.

Revision Topics	Alternative A The No-Action	Alternative B Active Restoration	Alternative C Passive Restoration	Alternative D Maximum Active Restoration	Alternative E Passive Restoration and Backcountry Management
Scenery management	Manages scenic character using the 1986 Visual Management System and Agriculture Handbook 701, "Landscape Aesthetics, A Handbook for Scenery Management," 1996.	Identifies scenic integrity objectives for the plan areas using the Scenery Management System.	All direction related to scenery management is the same as under Alternative B.	All direction related to scenery management is the same as under Alternative B.	All direction related to scenery management is the same as under Alternative B.
Sustainable recreation and recreation management areas	Emphasizes improving recreation opportunities by focusing on the maintenance, development, adaptation, or alteration of dispersed and developed recreation sites consistent with the recreation opportunity spectrum (ROS) class assigned to each area.	Updates recreation opportunity spectrum classes and integrates recreation management approaches with ecological restoration approaches. Includes Recreation Management Area (RMA) framework for recreation management and resource protection, to focus management where it is most needed and provide the public with more clarity and certainty about how lands would be managed for recreation uses.	Similar to Alternative B, updates recreation opportunity spectrum classes and includes RMA framework for recreation management and resource protection. However, lands within recommended wilderness areas would not be allocated to any one of the three RMA types.	Similar to Alternative B, updates recreation opportunity spectrum classes and includes RMA framework for recreation management and resource protection. However, more lands would be allocated to "General Recreation Areas" and fewer lands would be allocated to "Challenging Backroad Areas" on both forests, than under Alternative B. In addition, on the Sequoia NF, more lands would be allocated to "Destination Recreation Areas" and on the Sierra NF, fewer lands would be allocated to "Destination Recreation Areas" than under Alternative B.	Direction related to recreation management areas and sustainable recreation management is the similar to Alternative C, except Alternative E manages for backcountry management areas.
Additional Topics					
Production livestock grazing	Grazing direction includes the 2004 Sierra Nevada Forest Plan Amendment and the Forest Plans.	Management direction is similar to Alternative A, except changes were made to clarify Yosemite Toad plan direction and to allow for additional flexibility in managing grazing activities.	All direction related to production livestock grazing is the same as under Alternative B.	All direction related to production livestock grazing is the same as under Alternative B.	All direction related to production livestock grazing is the same as under Alternative B.
Forest products – planned sawtimber harvest on decadal basis	Sequoia NF: 3-7 million cubic feet or 15-35 million board feet Sierra NF: 10-13 million cubic feet or 50-65 million board feet	Sequoia NF: 5-12 million cubic feet of 25 to 60 million board feet Sierra NF: 20-46 million cubic feet or 100-230 million board feet	Sequoia NF: 2-6 million cubic feet or 10-30 million board feet Sierra NF: 5-13 million cubic feet or 25-65 million board feet	Sequoia NF: 6-16 million cubic feet or 30-80 million board feet Sierra NF: 30-70 million cubic feet or 150-350 million board feet	Sequoia 2-6 million cubic feet or 10-30 million board feet Sierra 5-13 million cubic feet or 25-65 million board feet
Timber suitability	Sequoia NF: 127,375 acres suitable for timber production Sierra NF: 328,471 acres suitable for timber production	Sequoia NF: 79,755 acres suitable for timber production Sierra NF: 141,626 acres suitable for timber production	Sequoia NF: 68,069 acres suitable for timber production Sierra NF: 105,095 acres suitable for timber production	Sequoia NF: 110,403 acres suitable for timber production Sierra NF: 234,154 acres suitable for timber production	Sequoia NF: 39,264 acres suitable for timber production Sierra NF: 92,084 acres suitable for timber production